

REMARKS

Responsive to the outstanding Office Action, applicant has carefully studied the Examiner's rejections. In the amendment, claims 37, 42, 44 and 54 were amended, claims 62-70 were canceled and claims 71 and 72 were newly presented. It is respectfully submitted that no new matter was added with these amendments. Further, no new claims fees are required since claims 62-70 were previously paid for and have since been canceled. Favorable reconsideration of the application in light of the following amendments and detailed arguments is respectfully requested.

Election

Claims 62-70 were withdrawn from consideration by the Examiner as being drawn to a non-elected species. In response thereto, claims 62-70 have been cancelled herein.

Information Disclosure Statement

The Examiner notes that the filed IDS fails to comply with the requirements of 37 CFR 1.97 and 1.98 as 2 of the filed references were believed to be irrelevant. However, the Examiner does acknowledge that the remainder of the references have been considered. In response thereto, an IDS will be submitted under separate cover to

identify the references which should have been submitted instead of those that were improperly identified on the IDS.

SPECIFICATION

Related to the above, the Examiner objected to the specification for improperly identifying prior art documents as US patents when they should have been identified as published US applications. The numbers submitted in the application referred to the publication numbers, as correctly identified by the Examiner.

In response thereto, the specification has been corrected herein to note that these are published applications, and not issued US patents, as identified. As the items were identifiable by one skilled in the art, it is submitted that correction of these numbers does not constitute new matter.

Therefore, entry of these changes to the specification and withdrawal of this rejection are respectfully requested.

REJECTIONS UNDER 35 USC 112

Claims 37-61 have been rejected under 35 USC 112, first paragraph, for failing to comply with the enablement requirement.

In response to this rejection applicants respectfully submit that one essential aspect of the fuel concentration increasing device (hereinafter "device") according to presently pending claim 37 is the provision of a membrane which is permeable or semi-permeable for the fuel (e.g. methanol) but not for the carrier component (e.g. water).

This feature of the membrane of the corresponding device, however, has to be seen in conjunction with the conditions given in the device, which conditions have already been clearly described in the present wording of claim 37). In the fuel storage device, fuel is storable or stored, respectively, and in the throughflow device being disposed in the fuel storage device a mixture of the fuel and of the carrier component is conducted. This means that in the corresponding device according to claim 37, in each case the concentration of the fuel within the (surrounding) fuel storage device is higher than the concentration of the fuel in the throughflow device or in the mixture, respectively.

This situation has to be considered when reading present claim 37 from the point of view of one skilled in the relevant art (and not the situation or the given conditions, respectively, of the prior art US 2003/0228252 ("Shurtleff) cited by the Examiner. As long as the concentration of the fuel (e.g. methanol) in the fuel storage device 1 is higher than the concentration of the fuel in the throughflow device 2, also a nation membrane is solely permeable for the fuel (methanol), but not for the carrier component (water). The latter feature is an inherent feature of a nation membrane. In other words: As long as the concentration of methanol in the best mode example described in the specification of the present application within the fuel storage device is higher than that within the throughflow device passing through said fuel storage device, in each case only methanol will diffuse through the nation membrane.

The described conditions are, however, essential for the device according to claim 37. As can be seen from the present claim wording, the corresponding device in each case deals with an increase in the concentration of the fuel in the mixture (i.e. the

conditions of the different concentrations are in each case as described above), so that the theoretically possible case of a reciprocal concentration in the aforementioned elements 1 and 2.

In other words, since the present claim wording (not to mention the description) clearly describes the aforementioned different conditions compared to the applied reference (and also describes all essential aspects with respect to the conditions), it is respectfully submitted that there is sufficient support within the claims and within the description as filed for a membrane being permeable or semi-permeable for the fuel, but not for the carrier component. This cannot be denied with the argument that the reference describes a nation membrane, which is selective for water.

Based on the best mode example given in the description and describing a nation membrane, it is clear for the one skilled when considering the original disclosure (e.g. page 11, lines 4 to 6 and page 12, lines 11 to 17) how to realize a corresponding device with a desired diffusion rate in detail: a thinner wall thickness of the membrane allows a higher fuel diffusion rate, a thickening of the wall thickness leads to a decreased diffusion rate of the fuel. It is therefore completely expected that one skilled in the art would be able to select an appropriate membrane to realize a fuel concentration increasing device according to claim 37 with the desired properties.

In view of the above, it is respectfully submitted that the disclosure, as filed, supports and enables the presently claimed invention. Withdrawal of this rejection is therefore respectfully requested.

REJECTIONS UNDER 35 USC 102

Claims 47, 48, 51, 52 and 55 have been rejected under 35 USC 103 as being unpatentable over Zimmermann (US 2004/0058222A1).

Zimmermann shows two adjacently disposed chambers, wherein the chambers are connected via a membrane. A first chamber 12 is filled with concentrated fuel (methanol) 22, and the second chamber 14 contains a mixture of fuel and water 24. Consequently, Zimmermann does not disclose designing the "chamber" which contains the mixture of fuel and water as a throughflow device, which is disposed in the interior of the other "chamber" (fuel storage device or tank, respectively). There is also no suggestion of this assembly from the Zimmermann document. The whole construction disclosed in Zimmermann (compare for example (0027)), which shows empty spaces above the methanol 22 or the methanol/water mixture 24, (compare the reference signs 23 and 25,) does not allow to guide one of the "chambers" in the interior of the other chamber. Consequently, the design of one of the fluid containing elements as an element which is arranged as a throughflow device in the interior of another element (i.e. as a channel or the like) is also not taught or suggested for one skilled based on Zimmermann when considering the ordinary skills of the one skilled.

This should also be clear from the fact that in all embodiments described in Zimmermann, in each case three essential elements are present: two (adjacent) chambers and a membrane separating these two chambers from each other. In contrast to this, the present invention only needs two essential elements: the outer

chamber or the fuel tank, respectively, and the inner "chamber" or conduit, respectively, which is designed as a conduit comprising a membrane wall.

This has been made even more clear by the changes to claim 37 herein, wherein claim 37 defines (based on page 8, line 3 and lines 15 to 17 and page 12, lines 10 to 11), more clearly that the throughflow device is disposed in the interior of the fuel storage device and explicitly states that the concentration of the fuel in said mixture is increased on its path through the throughflow device.

In view of the above it is respectfully submitted that claim 37 distinguished over Zimmermann in regard to 35 USC 102. Reconsideration and withdrawal of this rejection are therefore respectfully requested. The remaining claims rejected under this heading depend from what is believed to be an allowable claim 37, as discussed above, and are therefore believed to be allowable over this reference as well.

REJECTIONS UNDER 35 USC 103

Claim 40 has been rejected under 35 USC 103 as being unpatentable over Zimmermann and further in view of US 2002/0076599 to Neutzler.

Claims 49 and 53 have been rejected under 35 USC 103 as being unpatentable over Zimmermann and further in view of Beisswenger (US 2004/0003720).

Claims 50 and 59 have been rejected under 35 USC 103 as being unpatentable over Zimmermann and further in view of Shurtleff (US 2003/0228252).

Each of the claims rejected herein depend, directly or indirectly, from what is believed to be an allowable claim 37 for the reasons given above, and are believed to

be allowable based, at least, upon this dependence. However, for the following reasons it is believed that these claims further distinguish over the art of record.

The secondary references cited by the Examiner (US 2002/0076599 "Neutzler", US 2004/0003720 11Beisswengerlt and D4), do not suggest the design of one "chamber" as a throughflow device which is arranged in the interior of a fuel storage chamber.

Amended claim 37 (based on page 8, line 3 and lines 15 to 17 and page 12, lines 10 to 11), states more clearly that the throughflow device is disposed in the interior of the fuel storage device and explicitly defines that the concentration of the fuel in the mixture is increased on its path through the throughflow device. It is respectfully submitted that neither the primary reference, nor none of the secondary references cited by the Examiner discloses this feature. Therefore, no reasonable combination of the applied references teaches or suggests the invention as claimed. On this basis it is submitted that the present invention further defines over each of the combinations cited by the Examiner.

In view of the above, reconsideration and withdrawal of the rejections under 35 USC 103 are respectfully requested.

SUMMARY

The remaining claims on file are thus believed to be allowable. It is therefore submitted that the application is now in condition for allowance, and action towards that end is respectfully requested.

If the Examiner wishes to modify any of the language of the claims in an effort to move the application towards allowance, a telephone call to the undersigned would be greatly appreciated.

Respectfully submitted,

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